THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JEAN-YVES CHANE-CHING, FREDERIC FABRE and CHRISTIAN HERVIOU

_____

Appeal No. 1997-0359
Application No. 08/173,485

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HEARD: April 20, 2000

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Before, BARRETT, RUGGIERO and LALL, Administrative Patent Judges

LALL, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 14 through 21 and 23 through 34.

The disclosed invention relates to the preparation of a colloidal dispersion of a metallic cation compound in an organic medium. In the past, processes for the preparation of

organic

salts of ceric dioxide have used, as their starting materials, hydrated ceric dioxide. This material, however, was frequently produced by the oxidation and precipitation with a base of cerium (III) salt, followed by the separation of the resulting precipitant. The invention provides a novel storage-stable organic sol which is produced by directly preparing a colloidal dispersion of cerium (IV) salt, while avoiding the necessity for stages of precipitation and separation of hydrated cerium dioxide. In particular, the present invention provides a storage-stable organic sol which comprises a colloidal dispersion of at least one compound of an acidic metal cation, M^{n+} [see page 2 of brief] and an organic phase, wherein the organic phase comprises an organic liquid medium and an organic acid. The invention is further illustrated below by claim 23.

> 23. A process for the preparation of a storage-stable organic sol comprising:
>
> (i) reacting (a) a base reactant with (b) at least one aqueous solution of a salt of an acidic

> metal cation M^{n+} to form (c) an aqueous colloidal dispersion of M^{n+} values, in respective amounts of (a) and (b) effective to provide in the aqueous colloidal dispers-ion (c) a degree of supersaturation r in OH^- ions, wherein r is defined by the following equation,
>
> $$r = (n3 - n2)/n1$$
>
> where n1 is the number of moles of M^{n+} values present in the colloidal dispersion(s), n2 is the number of moles of OH^- necessary to neutralize acidity introduced via the aqueous solution(s) of acidic metal cation(s) M^{n+}, and n3 is the total number of moles of OH^- introduced by the base reactant;
>
> (ii) contacting the resulting aqueous colloidal dispersion of M^{n+} values with (d) an organic phase comprising (dl) an organic liquid medium and (d2) an organic acid, to form (e) an aqueous/organic phase mixture; and
>
> (iii) separating mixture (e) into an aqueous phase and a product organic phase.

There is no art rejection on appeal.

Claims 14 through 21 and 23 through 34 stand rejected under 35 U.S.C. § 112, first and second paragraphs.

Reference is made to Appellants' briefs[1] and the Examiner's answer for their respective positions.

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[1]A corrected brief was filed as paper no. 22. A reply brief was also filed as paper no. 24 and its entry approved by the Examiner without a response [paper no. 25]. Both are considered in this appeal.

OPINION

We have considered the record before us and we will reverse the rejection of claims 14 through 21 and 23 through 34 under 35 U.S.C. § 112, first and second paragraphs.

Analysis

We consider the two rejections separately.

35 U.S.C. § 112, First Paragraph

Claims 14 through 21 and 23 through 34 are rejected for the lack of enablement [answer, page 2].

The test for enablement is whether one skilled in the art could make and use the claimed invention from the disclosure coupled with information known in the art without undue experimentation. See United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Circuit. 1988), cert. denied, 109 S.Ct. 1954 (1989); In re Stephens, 529 F.2d 1343, 1345, 188 USPQ 659, 661 (CCPA 1976).

Thus, the dispositive issue is whether Appellants' disclosure, considering the level of ordinary skill in the art as of the date of Appellants' application, would have enabled

a person of such skill to make and use Appellants' invention without undue experimentation. The threshold step in resolving this issue is to determine whether the Examiner has met his burden of proof by advancing acceptable reasoning consistent with enablement requirement.

The Examiner contends [answer, pages 3 through 4] that "[t]he ordinary artisan knows that 'supersaturation' refers to the amounts of a compound or substance dissolved in a solvent being greater than the equilibrium amount at the subject temperature, e.g. This is wholly distinct from an OH^- ion concentration, or solution that is somehow electrically unbalanced, in the real world. As to this, the specification fails to have an adequate description and enablement of this essential part of the invention." (Emphasis in original.) The Examiner further asserts [answer, page 6] that "[i]t is not clear how supersaturation in OH^- ion relates to ordinary chemical technology. Therefore, Appellant's [sic] reference to an ordinary collegiate dictionary cannot satisfy a technical, chemical technology question." We agree with the

Appellants' position [brief, pages 7 and 8] that "degree of supersaturation" is well defined in the specification. The degree of supersat-uration is defined and explained in the specification at pages 7 and 10 through 14. Furthermore, Appellants have provided examples 1 through 7 showing how the invention has been put to the practical use. Therefore, we do not sustain the lack of enablement rejection of claims 14 through 21 and 23 through 34.

35 U.S.C. § 112, Second Paragraph

Claims 14 through 21 and 23 through 34 are rejected for failing to particularly point out the subject matter of the invention [answer, page 2]. The Examiner asserts [id. 3] that these claims are unduly broad and indefinite.

We note that the legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. See In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994).

At the outset, we note that breadth of the claims is not

equated with indefiniteness of the claims. An invention is entitled to as broad a coverage as is reasonable under the statutes.

As for the indefiniteness of the claims, the Examiner contends [answer, page 3] that "[w]hile claim 23 has been improved in some respects, problems persist, such as in claim 14, lines 2-3 [sic], where the metal M lacks antecedent basis in independent claim 23, since claim 23 recites a step of forming '(c) an aqueous colloidal solution of M^{n+} values,' while dependent claim 14 recites that at least 95% of the M in the

colloidal dispersion is in colloidal form." (Emphasis in original.) Again, we are persuaded by Appellants' argument [brief, page 6] that "the M^{n+} values are derived from a salt of an acidic metal cation M^{n+}, i.e., the aqueous colloidal dispersion contains metal M. Furthermore, the specification at page 8, and page 14 ... provides additional description of metal M in the colloidal form."

The Examiner also contends [answer, page 3] that "[i]n

claim 23, the ‘degree of supersaturation’ is defined by [an] equation, yet possible values thereof (limits, or units) are not set forth . . . . Particularly, the question of the correctness of the definition, or the meaning, of the term ‘degree of supersatura-tion’ exists.” Appellants further elaborate on the definition of the term "degree of supersaturation". They reproduce in the brief materials from the specification relating to the definition of supersaturation and explain how such a term is consistent with the conventional definition of the degree of supersaturation [brief, pages 6 and 7 and reply brief, pages 1 and 2]. We are convinced that the term “degree of supersatura-tion” as used in the claims is proper. Therefore, we do not sustain the rejection of claims 14 through 21 and 23 through 34 under 35 U.S.C. § 112, second paragraph.

CONCLUSION

In conclusion, we have reversed the decision of the Examiner rejecting claims 14 through 21 and 23 through 34 under 35 U.S.C. § 112, first and second paragraphs.

REVERSED

LEE E. BARRETT Administrative Patent Judge	)	
JOSEPH F. RUGGIERO Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PARSHOTAM S. LALL Administrative Patent Judge	)	

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